

REMARKS

Applicants appreciate the Examiner's thorough consideration provided to the present application. Claims 1-20 are currently pending in the instant application. However, claims 10-17 have been withdrawn from further consideration by the Examiner. Claims 1, 10 and 18 are independent. Claims 18-20 have been added for the Examiner's consideration.

The subject matter of additional claims 18-20 is fully supported by the original written description, including, but not limited to, FIGS. 2-4 and the corresponding description in the specification, including but not limited to paragraphs 0029 through 0040. Reconsideration of the present application is earnestly solicited.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook et al. (U.S. Patent No. 3,800,392) in view of JP 55-152108 ('108). Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook et al. in view of JP 55-152108 ('108), and further in view of Hill et al. (U.S. Patent No. 4,011,055). These rejections are respectfully traversed.

Applicants respectfully submit that the prior art of record fails to teach or suggest each and every element of the claimed invention. In addition,

Applicants submit that the alleged combination of Cook et al. in view of the '108 reference would not have been obvious.

In contrast to the prior art of record, the claimed invention includes a friction disk for a brake assembly having an annular structural core and at least one frictional lining element. Both the annular structural core and the frictional lining element include mounting surfaces, e.g., side(s) of the annular structural core and each frictional lining element include a sinusoidally shaped surface. For example, an intermediate mounting piece or layer is not required and the mounting core and the friction lining discs are shaped to matingly engage, e.g., integrally fit, with one another.

In contrast, the Cook et al. reference, as described in detail in Applicant's own discussion of the background art, merely suggests an annular structural core engaging with a pair of frictional wear surfaces. However, neither the Cook et al. reference or the JP '108 reference teach or suggest any problems associated with the design of the Cook. Accordingly, absent Applicants' own teachings, one of ordinary skill in the art would not have been motivated to modify either the frictional wear surfaces and/or the structural core of the Cook apparatus.

In addition, the Examiner relies upon the alleged teachings of the JP '018 reference to modify the Cook et al. device. Applicants submit that the Examiner's interpretation of this reference is unreasonable. For example, the Examiner relies upon the view or embodiment shown in FIG. 4 of the partially

translated, JP-108 reference. The Examiner should appreciate that the sintered frictional block (element 1) shown is engaged with a molded adhesive layer powder (element 3) that is also engaged with a rigid, reinforcing plate 2. The reinforcing plate and frictional block of the '108 reference appear unrelated in function and design to the aircraft brake disc of Cook et al. The Examiner will appreciate that although a frictional block 1 is shown as having a wave-like appearance, the reinforcing plate 2 is designed with a flat mounting surface. Therefore, the alleged sinusoidal to sinusoidal engagement between core and frictional element is NOT shown in the JP-108 reference.

Instead, an intermediate adhesive layer 3 bonds the friction block 1 to the flat, mounting surface(s) of the reinforcing plate 2. Since both the alleged structural cores of the Cook et al. reference and the JP-108 reference are specifically designed with flat profile(s) or mounting surface(s), the alleged combination fails to teach or suggest each and every element of the unique combination of the claimed invention, e.g., including an annular structural core having at least one sinusoidally-shaped mounting surface.

Although the present invention may include an intermediate adhesive or bonding agent, a specific advantage of the claimed invention is that the annular structural core and friction lining element(s) are specifically designed to integrally fit with one another thereby increasing the surface area contacting between the two surfaces, e.g., with sinusoidally shaped mounting surfaces. In the prior art of record, the mounting surfaces of the structural core are flat and

do not include the advantageous sinusoidal mounting surface of the claimed invention. Accordingly, this rejection should be withdrawn.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

Accordingly, reconsideration and withdrawal of the claim rejection are respectfully requested. Moreover, the Applicants respectfully submit that the instant application is in a condition for allowance.

As to the dependent claims, Applicants respectfully submit that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.

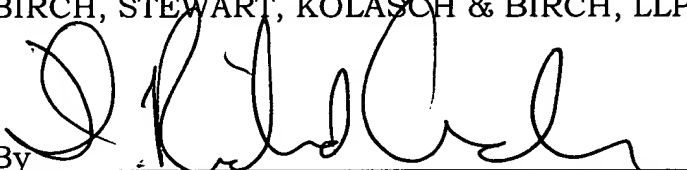
In the event there are any matters remaining in this application, the Examiner is invited to contact Matthew Shanley, Registration No. 47,074 at (703) 205-8000 in the Washington, D.C. area.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

MARKED-UP VERSION OF AMENDMENTS

IN THE CLAIMS

Claims 18-20 have been added.